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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/512,141

10/22/2004

Mitsuo Yasaka

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38834

7590

02/25/2008

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EXAMINER

KACKAR, RAM N

ART UNIT

PAPER NUMBER

1792

MAIL DATE

DELIVERY MODE

02/25/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/512,141

Applicant(s)

YASAKA, MITSUO

Examiner

Ram N. Kackar

Art Unit

1792

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/26/2007.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-12 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-3 and 5-12 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/CDC)
4) ☐ Interview Summary (PTO-413)
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____
Paper No(s)/Mail Date _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(c), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(c) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/23/2007 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1, 3, 5-9 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Loewenhardt et al (US 6356097) in view of Biricik et al (US 5173443).**

Loewenhardt et al disclose a detection port type probe, comprising an electro conductive support (metal chamber 104 and Col 1 lines 20-25) having a view port on an opening (106), a dielectric (quartz window) member facing plasma (254), having a probe electrode on the other side (114) of the window and a voltage waveform measuring unit (116) to measure plasma voltage fluctuations. The probe 114 is disclosed to be of a size to cover a large part of window, leaving only a peripheral part. Further, Loewenhardt et al teach that a larger size of the probe helps improve signal (Col 6 line 8-22).

Loewenhardt et al do not disclose the probe electrode to be made of transparent conductive material. It is however noted that since the electrode is attached to a view port it would be advantageous for it to be transparent so that even larger area of the view port could be used.

Biricik et al teach the use of transparent conductive windows for allowing viewing as well as shielding from electromagnetic radiation (Col 1 lines 30-45).

It would therefore be obvious for one of ordinary skill in the art at the time of invention to use the probe made of transparent material to allow the use of even larger part of window for its normal viewing purpose. Further since it is transparent and is a shield it could cover the whole window to provide complete shielding and viewing area.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Loewenhardt et al (US 6356097) in view of Biricik et al (US 5173443) as applied to claims 1, 3, 5-9 and 11-12 and further in view of Turner et al (US 5576629).

Regarding claim 2 the impedance matching unit as disclosed in the specification is an amplifier (generally high input impedance device). Use of amplifiers to measure signal voltages is however well known in the art. The voltage-measuring instrument 116 would obviously be a high input impedance device.

Turner et al disclose electrical sensors being used with amplifiers to amplify signals in order to use for control and monitoring (Fig 12 and 14).

It would therefore be obvious for one of ordinary skill in the art at the time of invention to have used amplifier for detection accuracy.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Loewenhardt et al (US 6356097) in view of Biricik et al (US 5173443) as applied to claims 1, 3, 5-9 and 11-12 and further in view of Saito et al (US 6562186).

Loewenhardt et al in view of Biricik et al do not disclose a flange to support the quartz window. This however would be obvious to have a flange to attach the window to the chamber as disclosed by Saito et al (Fig 2 -31).

Therefore it would have been obvious for one of ordinary skill in the art at the time of invention to use a flange to attach the window to the metal chamber.

Response to Arguments

Applicant's arguments filed 10/23/2007 have been fully considered but they are not persuasive.

Applicant's arguments regarding the size of the probe electrode are addressed above.

Regarding the size of the electrode, contrary to applicant's contention, Loewenhardt et al considers the size and its benefits very clearly. Further, the rejection is based on the combination of well known elements combined in a predictable way to yield the claimed invention.

The article and news report scanned under the heading "Rule 130, 131 or 132 Affidavit" is neither an affidavit nor IDS as not accompanied by required documents essential for their consideration.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ram N. Kackar whose telephone number is 571 272 1436. The examiner can normally be reached on M-F 8:00 A.M to 5:P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571 272 1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ram N Kackar/
Primary Examiner, Art Unit 1792